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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/789,963  
Filing Date: February 27, 2004  
Appellant(s): SEN ET AL.

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Steven L. Nichols  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed September 30, 2008 appealing from the Office action mailed March 6, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

This appeal involves claims 48, 49, 51-53, 55-58, 71, 72 and 80-90.

Claims 1-47, 50, 54, 59-70 and 73-79 have been canceled.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. However, the anticipation rejection of claims 80-85 and 88-90 under Kasperchik et al is withdrawn here.

#### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### **(8) Evidence Relied Upon**

US 7,086,732

Kasperchik et al.

8-2006

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 48, 49, 51-53, 55-58, 71, 72 and 80-90 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This is NEW MATTER rejection since newly recited "deposited as a liquid on said substrate" in claim 48 does not have support in originally failed specification. Applicant points to PP 0021, but the examiner does not see any support for the amendment.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 48, 49, 51-53, 55-58, 71, 72 and 80-90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether said deposited liquid in claim 48 stays as a liquid or not on said substrate, and thus claims are indefinite.

The recited preamble, "The microporous coating of ---", in claims 49, 50-53, 55-58, 71, 72 and 80-90 lack a proper antecedent basis in claim 48 wherein "A print medium" is claimed with an additional substrate as a base as filed on November 1, 2007 instead of "A microporous coating" in claim 48 filed on July 10, 2007. Consistency is needed.

Claims 81-84 are confusing and indefinite since they recite polymers (such as polystyrene) for a core material and monomers (such as n-ethylhexylacrylate) for a shell material. Consistency is needed. Said monomers do not form a shell and they must be polymerized to become a shell.

The recited "said shell material comprises a coalescing agent" in claim 90 is confusing and indefinite since said coalescing agent is a solvent as taught by

Kasperchik et al (middle of col. 8 in US 7.086,732), and a solvent cannot form a shell.

Addition of "further" before "comprises" may be needed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 48, 49, 51-53, 55, 57, 58, 71, 72, 86 and 87 are rejected under 35 U.S.C. 102(e) as anticipated by Kasperchik et al (US 7.086,732).

Fig. 1, claim 1 and the disclosure on cols. 3 and 4 of Kasperchik et al teach a print medium having the instant three layers.

Kasperchik et al teach multi-layered microporous coating and print medium in abstract and fig. 1 and at col. 3, line 27 to col. 5, line 60 wherein hydrophobic core-hydrophilic shell polymers are taught. The monomers for the hydrophilic shell are taught at col. 4, lines 53-65 and col. 5, lines 1-20. Acrylates encompass the instant

butyl acrylate as evidenced by example 1 (col. 9, line 29). Example 1 also teaches dimethylaminoethylmethacrylate as a monomer for a shell. The monomers for the hydrophobic core are taught at col. 6, lines 43-48. Fusion by heat and use of a coalescing agent are taught at col. 8. The hydrophobic core has a Tg of about 35°C-180 °C, more preferably about 60°C-130 °C (col. 5, line 25-29), and thus the Tg of hydrophilic shell encompasses the instant room temperature since the Tg of said shell is lower than that of core and since example 1 shows Tg of 40°C for the shell. An overlapping range would be anticipation.

Thus, the instant invention lacks novelty.

Note that rejection of claims 80-85 and 88-90 is withdrawn.

Claims 48, 49, 51-53, 55, 57, 58, 71, 72, 80 and 86-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasperchik et al (US 7.086,732).

The instant invention further recites an amount of core material and amounts per square meter over Kasperchik et al who teach 50 wt% core material in example 1. The instantly recited more than 50 wt% in claim 80 encompasses 50.1 wt%, for example, and thus it would be obvious over 50 wt% in example 1 of Kasperchik et al. Kasperchik et al also teach an amount of core-shell latex (bottom of col. 5) and first microporous layer (thickness of the colorant-receiving layer, bridging PP on cols. 6 and 7).

It would have been obvious to one skilled in the art at the time of invention to utilize the instant amounts of components per square meter in Kasperchik et al since Kasperchik et al teach the amounts in different terms encompassing the instant unit or it

would be obvious design choice, and to utilize more than 50 wt% of core material since Kasperchik et al teach 50 wt% core material in example 1 and since changing amounts of the given components would be considered a routine practice.

**(10) Response to Argument**

*With respect to 35 U.S.C. 112, 1<sup>st</sup> PP rejection;*

Appellant points to Fig. 1 and PP [0021] wherein a wet on wet configuration is taught. However, a wet application does not mean a liquid application since said wet application encompasses a paste application which is not a liquid application. A liquid is not a paste. Thus, the original disclosure failed to support the limitation.

*With respect to 35 U.S.C. 112, 2<sup>nd</sup> PP rejection;*

(1) Claim 48 is directed to a product, not to a process, and thus a physical state, such as a liquid or a solid, of a component is an important factor contrary to appellant's assertion.

(2) A recitation of consistent preamble in the dependent claims is required. Claim 48 now recites "A print medium --- (with an additional substrate as a base)" and dependent claims recite "A microporous coating ---" as filed on November 1, 2007, and appellant failed to amend the preamble in said dependent claims. See previous amendment filed on July 10, 2007 wherein claim 48 recites "A microporous coating" and the dependent claims recite "The microporous coating ---" which was proper. Thus, the scope of claim 48 has been changed, and thus the preamble of the dependent claims



should have been amended according to the amended claim 48. Appellant has refused to do so.

(3) Claims recite monomers (such as n-ethylhexylacrylate) for a shell material. But, said monomers do not form a shell and they must be polymerized to become a shell.

(4) Specification teaches that a coalescing agent is able to "effectively lower the Tg of the shell for soft shells having a higher than process temperature Tg" in PP [0041] as stated by appellant. Said PP [0041] and the instant claim 58 also recite various coalescing agents which are all solvents, and also taught by Kasperchik et al (middle of col. 8 in US 7.086,732). For example, solvents such as 2-butoxyethanol cannot form a shell by themselves. Addition of "further" before "comprises" may be needed.

*With respect to anticipation rejection under Kasperchik et al;*

The examiner has stated that it is unclear whether said deposited liquid in claim 48 stays as a liquid or not on said substrate. Appellant's response is that it is immaterial whether said deposited liquid stays indefinitely in liquid form or not in claim 48. But, claim 48 is directed to a product, not to a process, and thus Kasperchik et al do not need to show said liquid deposition.

Again, appellant asserts that Kasperchik et al teaches: "The colorant-receiving layer 8 may also include a small amount of polymer binder ---", and that thus, Kasperchik et al fail to meet the instantly recited "without requiring a second binder". However, said "**may also include**" is an optional expression, and thus, said

**polymer binder is an optional component.** Also, see claims of Kasperchil et al wherein no polymer binder is recited.

Appellant further asserts that Kasperchil et al failed to show the instantly recited limitation, "exhibits self-adhesive properties at room temperature such that said latex layer remains in place on said first microporous layer without requiring a second binder and without being fused". However, such property is an inherent property of the latex layer taught by Kasperchil et al since Kasperchil et al teach the same latex (core-shell polymer particles) and layered structure (print medium).

With respect to claim 49;

Appellant asserts that the colorant-receiving layer 8 is not "ink permeable" by pointing to col. 4, lines 43-46 of Kasperchil et al. However, Kasperchil et al further teach "both the colorant -receiving layer 8 and the vehicle sink layer 6 are porous, the inkjet ink applied to the print medium 2 easily penetrates into these layers" in lines 46-49, and thus said colorant-receiving layer 8 would be "ink permeable" inherently since it is porous.

With respect to claim 52;

Contrary to appellant's assertion, the examiner discussed Tg of the hydrophobic core and a relationship of said Tg of the hydrophobic core and that of hydrophilic shell.

With respect to claim 55;

Contrary to appellant's assertion, the examiner discussed that the monomers for the hydrophilic shell are taught at col. 4, lines 53-65 and col. 5, lines 1-20 wherein a hydrophilic shell with a cationic group is taught.

With respect to claim 57;

Contrary to appellant's assertion, the examiner stated that use of a coalescing agent is taught at col. 8, and the hydrophobic core (a part of the latex) with the coalescing agent is taught in lines 63-65.

With respect to claim 86;

The examiner stated that the core-shell particles in example 1 would meet the claim 86 inherently, and appellant failed to show otherwise.

With respect to claim 87;

The example 1 of Kasperchik et al shows T<sub>g</sub> of 40°C for the shell, and the examiner stated that the hydrophobic core has a T<sub>g</sub> of about 35°C-180°C, more preferably about 60°C-130 °C (col. 5, line 25-29), and thus the T<sub>g</sub> of hydrophilic shell encompasses the instant room temperature since the T<sub>g</sub> of said shell is lower than that of core

With respect to claims 80-85 and 88-90;

The rejection of claims 80-85 and 88-90 has been withdrawn.

With respect to obviousness rejection under Kasperchik et al;

Appellant failed to invoke a common ownership under 35 U.S.C. 103 ( c) in timely manner. Appellant's current statement of a common assignment does not make Kasperchik et al reference invalid under 35 U.S.C. 103 (a) since such statement does not meet the requirement for said common ownership under 35 U.S.C. 103 ( c).

With respect to claims 88 and 89;

Contrary to appellant's assertion, the examiner stated that it would have been obvious to one skilled in the art at the time of invention to utilize the instant amounts of components per square meter in Kasperchik et al since Kasperchik et al teach the amounts in different terms encompassing the instant unit or it would be obvious design choice by pointing to the amount of core-shell latex (bottom of col. 5) and first microporous layer (thickness of colorant-receiving layer, bridging PP on cols. 6 and 7). The instant first microporous layer is the colorant-receiving layer of Kasperchik et al.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

THY/November 20, 2008

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